

ABSTRACT

The invention concerns a method for determining a deviation of at least one regulating variable on chip removal machines with a mechanical drive for a tool and/or a workpiece, regulated by a control system, wherein the regulation comprises a plurality of values C, X, Z of at least three spatial axes c, x, z for the control system and for the drive, and the values C, X, Z have a functional relation such as $Z = f_{bi}(C, X)$ with the axes c, x, z . A protocol is prepared from a plurality of control system actual values $(C_{p,s}, X_{p,s}, Z_{p,s})$ detected by measuring means and/or selected drive actual values $(C_{p,a}, X_{p,a}, Z_{p,a})$ and a control system nominal value according to $Z_{bi,s} = f_{bi}(C_{p,s}, X_{p,s})$ and/or a drive nominal value according to $Z_{bi,a} = f_{bi}(C_{p,a}, X_{p,a})$ is calculated at least in relation to the z -axis, and a control system differential value according to $D_{z,s} = Z_{p,s} - Z_{bi,s}$ and/or a drive differential value according to $D_{z,a} = Z_{p,a} - Z_{bi,a}$ is calculated at least in relation to the z -axis. The invention also pertains to a chip removal machine which implements such a method.

List of reference symbols

- 1 workpiece
- 2 positive deviation
 - 2.1 positive deviation of 1st degree
 - 2.2 positive deviation of 2nd degree
 - 2.3 positive deviation of 3rd degree
- 3 negative deviation
 - 3.1 negative deviation of 1st degree
 - 3.2 negative deviation of 2nd degree
 - 3.3 negative deviation of 3rd degree
- 4 z-value